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ABSTRACT

The author describes the Mentor Academy Program (MAP) a skill-based model for training gifted high school students as mentors and thereby becoming leaders in processing information and networkers creating and sharing information. Chapter 1 offers historical and philosophical, gifted education, and high school perspectives to stewardship (the dual responsibility to self and others to realize potential). Five models for educating the gifted are compared: the social/survival model (activities are mostly games), the curriculum model (which emphasizes mastering the basics), enrichment (which extends the curricular model with options within and outside the school), stewardship (which involves students as leaders in the community), and Micronet (which combines stewardship with microcomputer technology). The MAP, particularly as it was developed at Lord Elgin High School (Ontario, Canada), is described in chapter 2. Five components of the program are discussed: orientation (which focuses on assessment and on a match of students with potential programs), networkshop (designed for skill acquisition in areas useful to becoming an effective mentor, steward, and networker), mentorship (in which students apply their newly acquired networking skills to working with mentors in the community), stewardship (during which the student engages in activities of service), and micronet (involving training the students to network their resources via microcomputer programing). A final chapter briefly addresses MAP outcomes including that students were better able to resolve problems arising from differentiated learning situations and students were better able to meet their own learning expectations for areas of interest. Appended are a grade 9 enrichment program proposal and a description of the LESS (Learning Enrichment Service by Students) program at Lord Elgin High School. (SW)

ED224269

Programming for the Gifted Series

STEWARDSHIP:

TRAINING THE GIFTED AS COMMUNITY MENTORS

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
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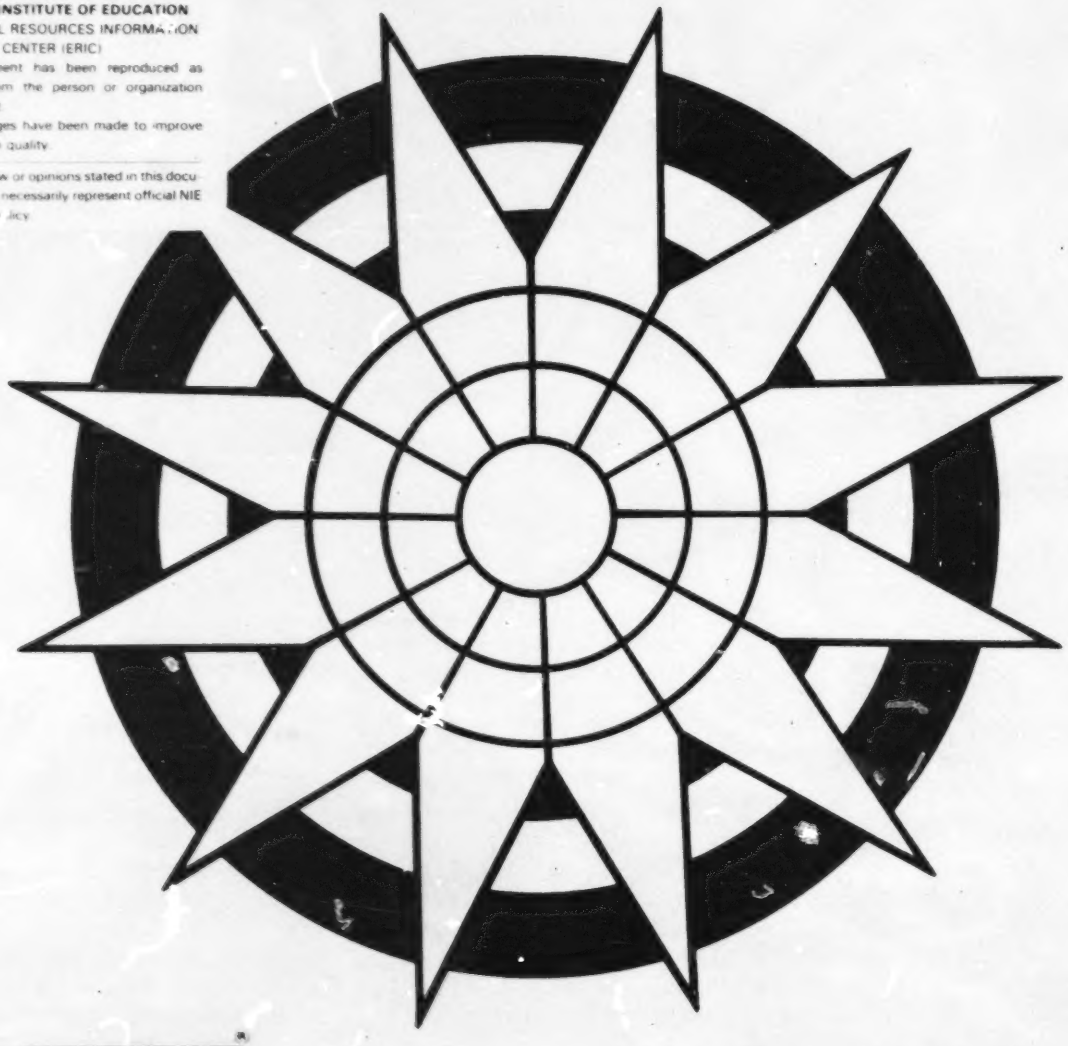

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INTRODUCTION

The Mentor Academy Program (MAP) is a skill-based model for training gifted high-school students as mentors. Through a series of training sessions, students learn skill assessment, acquisition, application, apprenticeship, and anticipation in order to work more effectively with mentors, and to become mentors for others in the community as well as for themselves. This training not only realizes and recognizes the potential of the gifted to use community resources more effectively but also to serve the needs of the community and themselves better. It gives students the knowledge of new technologies to cope and to create within an information society.

For the past 15 years Ted Runions has worked with gifted high-school students in a variety of learning settings, bringing together learning strategies and resources from community, futures, adult, career, experiential, alternative, and gifted education networks. Over the past 4 years his development of the Mentor Academy Program (MAP) at Lord Elgin High School, Burlington, Canada, has broadened the concept of mentorship from learning from mentors in the community to becoming mentors for themselves and others. This development sets the stage for the mentor becoming a leader in processing information and a networker creating and sharing information resources in a micro-electronic environment.

CHAPTER 1
STEWARDSHIP

HISTORICAL AND PHILOSOPHICAL PERSPECTIVES

The concept of stewardship—the dual responsibility to self and others to realize potential—is rooted in the education and social movements of the 1960's and 1970's. It has significant consequences for educating the gifted in the 1980's and 1990's (Exhibit 1-1).

Openness to potential gained momentum in the 1960's with the introduction of the open classroom. Freeing the student from the classroom provided educational alternatives for the adventurous student. Support resources such as self-directed learning strategies, resource centers, contract learning, and independent study underlined the individual's need and ability to explore a variety of options for self-actualized learning.

The legitimization of student learning outside the four walls of a classroom soon led to the freeing of students from the physical school as long as they evidenced responsible learning. The ecological spirit of the early 1970's overflowed into education, reinforcing the renewed relationship between school, the local community, and society in general. The open school spawned many support systems for the students to explore experiential and community-based learning. The community school movement, environmental education, experiential education, values and career education, continuing education—all served the individual's need to relate with others in different learning settings. Not only did education become more community-directed than school-directed, but also individual learners became more other-directed than self-directed. The flowering of the learning exchange movement in the 1970's best exemplifies the movement to community learning, serving the needs of all who wish to participate by supporting their individual initiative and the cooperative exchange of resources.

The 1980's are also sparked by a new openness to potential, a potential that promises to involve the total society. The activity that characterizes both the process and the end product of this potential is networking—linking individuals to their resources as resources. Macro- and micronetworks are spinning a new social-learning fabric that is finding local and global support, institutionally and technically. Connections for potential are being popularized through the mass media: split brain research is unfolding the insight of hemispheric learning; the microcomputer is establishing a new connection between man and machine and unleashing a creative power to maximize available and developing resources; the feminist movement supports a more equal relationship between men and women, creating the potential for a more meaningful society.

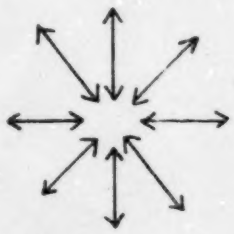
Exhibit 1-1. Stewardship and Educational Change

1960's	1970's	1980's	1990's
Open Classroom	**Open School**	**Open Society**	**Open Worlds**
Watchwords			
alternatives options to regular program	ecology renewed relationship between man and environment	networking linking individuals to their resources as resources	synergy the whole greater than the sum of its parts
Action			
Self-directed learning	Community-directed learning	Globally-directed learning	Planetary-directed learning
Supports			
Resource centers, independent study, contract learning, credit system, alternative public schools	Community schools, environmental ed, experiential ed, values ed, career ed, continuing ed	Conserver ed, microcomputers, special ed, co-op ed, learning exchanges, information society	hemispheric ed, syntegration
Result			
Stewardship responsibility for oneself	Stewardship responsibility for environment	Stewardship responsibility for others	Stewardship responsibility for anticipating future openness

Stewardship and Educational Change for the Gifted

Event			
1957 Sputnik	1973—U.S. Congress frees money for gifted	revolving door concept, economic cutbacks	To be announced
Identification			
IQ 140+, achievement	IQ 130+ achievement characteristics - intellectual aesthetic kinesthetic psychosocial recommendation - parent teacher peer community triad - task commitment creativity above-average ability	IQ 120+ + "readiness"	+ technical competency psychic IQ
Programming			
Acceleration specialization—in-depth	Enrichment Multi- and interdisciplinary	Stewardship leadership, community-based, experiential	Hemispheric
Content			
Science, math, thinking	Social sciences, communication, career	Arts, creativity, futures, international affairs, computers	Home learning electronic systems

The mid-1980's and the 1990's will witness a synergy of networking, as well as its globalization and internalization. People will talk of personal networks that will not only weave a fine social fabric but will begin to spin psychic threads, linkages to even greater human potentiality. This human synergy, or humosis, is effecting an exciting wholeness, a syntegration unknown to man or machine. A symbol that represents humosis, an openness to inner and outer human potentiality and their connection, is



The multidirectional arrows are joined by inner and outer space. Stewardship captures this individual and social responsibility to share in today's transforming spirit.

GIFTED EDUCATION PERSPECTIVES

A similar example of humosis is the growth of special education, which focuses on the potential of all learners; this in turn maximizes the realization of the potential of a whole society. It is equally significant that the gifted are part of the special education movement and that they accept the responsibility to realize their potential and that of others. Stewardship demands such a response and responsibility.

The challenge to realize more effectively and imaginatively the potential of the gifted has grown over the past decades. In the late 1950's, in response to Sputnik, the intellectually gifted, as related closely to a top IQ score, accelerated young mathematicians and scientists to reach the moon. In the early 1970's a broader definition was given; the aesthetic, kinesthetic, and psycho-social gifted joined the intellectually gifted in being "enriched" in a variety of ways and many subject areas. The efforts of J. Renzulli in the late 1970's, especially the revolving door concept, has also broadened the selection base from the usually accepted IQ of 130+ to 120+, acknowledging that the unidentified gifted are as important as the identified gifted.

Three interesting developments are taking place relative to growth in stewardship. There is an increased awareness of the importance of readiness on the part of the gifted student in choosing a specific program that supports self-selection, especially at the high-school level.

More emphasis is being given to differentiated programs, creating options that match learning styles and learning cycles with program and teacher styles. A third, more future-directed development is skill acquisition, application, and assessment in the new technologies and psychic sciences as prerequisites for certain programs of the gifted. To realize one's potential and that of others will require more and more challenging responsibilities.

HIGH-SCHOOL PERSPECTIVES

For comparison, five model programs are presented (Exhibit 1-2). The first, the Social/Survival Model, is most often initiated by gifted students themselves. Activities in this model are mostly play type such as highly competitive chess, life-and-death fantasy games, computer gaming, apparently mindless and timeless strumming of the guitar, late-evening video movie clubs, encyclopedic reading for game shows, and problem-solving competitions. A myriad of games also infiltrate the daily school routine.

Much of this activity is at best viewed as clever but it is often considered cliquish, gamesome, transitional, immature, and certainly extra-curricular. However, much is being learned while the gifted play. In Beyond Boredom and Anxiety M. Csikszentmihalyi (1975) documents that play provides a means for exploring the limits of ability through discovery, exploration, problem solving, novelty, challenge, and interaction. These peer-directed activities are flow directed in that they merge action and awareness in challenging tasks within the student's ability to perform, centering the student's attention on a limited stimulus field, giving clear feedback about the student's participation, supporting the student's control over his or her actions, and allowing for loss of self-consciousness and total involvement (Csikszentmihalyi, 1975). The joy of play can also be the joy of learning. Without school support, the gifted prove their resourcefulness, but with school support their resourcefulness is given recognition.

The Curriculum Model emphasizes mastering the basics. Content and skills are usually under the direction of the teacher, who, as the expert, guarantees a direct line to higher performance. Differentiated activities for the gifted often include learning contracts, independent study, seminars, debates, tutoring, guest speakers, creative problem solving, and learning labs. Most of these are school-based, either in the classroom or the resource center. The content of the programs is usually thematic, multidisciplinary, and modular.

This approach is often perceived by gifted students as narrow and unchallenging. One gifted student compared his school life to monastic learning—isolated individuals in pursuit of the one right way. The analogy was extended by others who compared taking notes from the blackboard and from books and writing an essay, to monks illuminating the sacred word. Another interesting and critical comment reflects the students' indifference to traditional schooling: The system is not forcing

Exhibit 1-2. Programming for the Gifted at the High-School Level

Models	Focus	Strategy	Identification	Program Types	Program Activities	Learner Styles	Teacher Styles	Environments	Program Strengths	Program Weaknesses
Social/ survival	Play	Need	Interest, peer	Peer-directed clubs, teams	Chess, video, volunteer, fantasy games, guitar, computer, orchestra	Friend/ competition	Coach	School, home	Fun, peer interaction	Sporadic, short-term, elitquish, extra-curricular
Curriculum	Basics	Mastery	IQ, grades, teacher, recommendation of elementary school	Teacher-directed streaming, integration, acceleration, compacting, modular	Contracts, seminars, creative problem-solving, basic thinking skills, debates, tutoring, multidisciplinary, field trips	Researcher	Expert	Classroom resource center	Research skills, academic discipline	Ph.D. model, cognitive only
Enrichment	Options	Interest	Interest, IQ grades, teacher recommendation, creativity, talent, peer	Learner-directed withdrawal	Community involvement, career development conferences, competitions, workshops, creativity festival, student exchange, futures seminars, cross-age tutoring	Explorer	Facilitator	School, community	Choice, alternatives scope	Entertainment, little continuity, introductory
Stewardship	Leadership	Responsibility	Readiness, interest, IQ, grades, teacher recommendation, creativity, talent, community, peer	Community-directed experiential	Entrepreneurships, total immersion, intergeneration mentorships, community internships, peer counseling, executive internships, adventureships	Leader	Counselor trainer, catalyst	School, community	Adolescent focus, challenge, change, self-management	Selective, complex
Micronets	Scope/ sequence synergy	Management	Micro-competency	Future-directed electronic cottage	Human resources exchange networks	Networker, programmer	Information counselor	Personal, institutional, regional	Systems management	Competencies, complex

them to drop out but to drop in and get through quickly, while learning as much as possible outside the school setting. The indepth approach of the curricular model may be appropriate for the doctoral candidate but is not the most appropriate model for high-school students.

Enrichment programming extends the curricular model with options within and outside school. Examples of typical enrichment activities are conferences, creativity festivals, problem-solving competitions, communications workshops, futures seminars, student exchanges, cross-age tutoring, career exploration, and community service. Unfortunately, for all its good intentions, enrichment does not have the credibility of the classroom for serious learning. It is often seen by students as entertainment or time off, with little continuity to other learning experiences. What is needed is a way to link the indirect experience of the classroom with the direct experience of life and to involve the student as the linking agent. A good high-school model must recognize the potential excitement, energy, and exasperation of adolescents as well as tap the potential for more adult action.

Stewardship, like the social/survival model, starts with the needs of the adolescent. When working with gifted high-school students, the factor most often forgotten is that these students are adolescents, perhaps very different adolescents, but still adolescents. Their need for independence, involvement, and intensity of experience is as important as learning to think, read, and write. They need to experience independence from school, which is like a surrogate parent, and from their real parents. Involvement is not "busyness" but intense experience in the real world with real decisions and consequences, risks and rewards. Stewardship capitalizes on the gifted adolescents' expectations for reality, relationships, and responsibility by involving them as leaders in the community and experientially based programming supported by a network of facilitators.

A fifth model, Micronet, is both a direct result of and future need for combining stewardship with microcomputer technology. Micronets are small, microcomputer-assisted information networks that link individuals and institutions in order to generate and share information resources. The management of one's own learning and the learning of others challenges the cooperative management of information resources. The effectiveness of a micronet to meet this challenge is related to its ability to anticipate and allow for increased utilization of available resources and to give constant and constructive feedback to the greatest number of users at the lowest possible cost. The potential of microcomputers for human resources management is quickly gaining recognition.

Through interactive learning, the Mentor Academy Program offers all five models to gifted high-school students.

REFERENCES

Csikszentmihalyi, M. Beyond boredom and anxiety: The experience of play in work and games. San Francisco: Jossey-Bass, 1975.

CHAPTER 2
THE EMERGENCE OF A STEWARDSHIP MODEL

As the Mentor Academy Program evolved, it moved from being school based and directed to being community based and experientially directed. At the same time, the focus of activities changed from career exploration to leadership training. By the midpoint of the first year, we recognized that students themselves have the potential to identify, contact, and monitor their own mentors; 20 sets of feet and fingers have more energy for "doing the walking and talking" than a single teacher-coordinator. Because of the variety of student interests, the program uses many mentors. This requires a continual "people search." Negotiations with potential mentors give students the necessary confidence and competence to begin managing their own mentor network.

By the end of the first year, certain needs became evident, including better skill assessment, acquisition, application, apprenticeship, and anticipation in order to assist the students more effectively to learn from their mentors and to become mentors themselves. Five interactive learning phases, or webs, grew from these needs—orientation, networkshop, mentorship, stewardship, and micronet (Exhibit 2-1). The networkshop was initiated in the second year of the program to provide a more extensive skill acquisition component for better networking competency. In the third year, the stewardship component was added, providing concrete leadership training. The micronet component developed during the fourth year; it emphasizes the use of the microcomputer as a networking agent. The mentorship, the stewardship, and the micronet aspects of the program give varied opportunities to apply networking skills acquired in the networkshop web.

The term learning web is used instead of phase to emphasize the dynamic, interactive quality of the learning experiences. For example, the orientation web focuses on skill assessment, but it includes the acquisition of assessing skills, the application of these skills, help for others to assess their own skills, and the beginning of a micronet, using a Human Resource File. To further the analogy, the student, like the spider, is the one who spins the web.

Lord Elgin High School

For the purpose of replication, it is important to understand the unique learning environment that fostered the program at Lord Elgin High School in Burlington, Ontario, Canada. From its inception in 1970, the school was designated as a "lighthouse school", exploring and experimenting with alternative programs and administrative structures. It is a community school, located in a suburban middle-class area. It operates September through June, in two semesters. Perhaps its most significant and

Exhibit 2-1. Mentor Academy Program Flow Chart

Month	Feb-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Jan-
Learning Webs	1-Orientation	2-Networkshop	3-Mentorship	4-Stewardship	5-Micronet
PROGRAM/PRODUCTS	**Skill Assessment** Learning styles Learning cycles Interests Career Choices Creativity Self-concept Supplemental research Student network Parent network Academy resource pool Decision making Planning Human resources file	**Skill Acquisition** 1. Self-help skills Motivation Journal keeping Interviewing, telephone skills Decision making Research Letter writing Contract learning Self-evaluation Stress-management 2. Group-help skills Group process Creative problem-solving Communication Leadership Peer counseling, tutoring 3. Community-help skills Social research Human resources development Computer assisted information exchange Community video skills 4. Global-help skills Hemispheric learning General systems	**Skill Application** Identify and learn from six community mentors Senior citizen Junior citizen Career Academic Creative Micro Establish futures seminars Leaders in new directions People-skill competencies Mentorship training Enrichment Human resources development Management of own learning	**Skill Apprenticeship** Identify, develop and manage community leadership projects 1. Community, video 2. Intergenerational job brokerage 3. Information exchange network 4. Educational internships 5. Executive internships 6. Social planning projects 7. Career videodoc 8. Peer counseling 9. Cross-age mentoring 10. Entrepreneurships 11. Corps Leadership management of others learning	**Skill Anticipation** Complete micronet—a microcomputer-assisted information exchange network—personal and group **Final Products** 1. Weekly learning contracts (Analog) 2. Academic interest research 3. Community video 4. Leadership project 5. Human resources directory 6. Interview tapes 7. Micronet 8. More effective learning 9. Greater self-confidence

Week	Monday	Tuesday	Wednesday	Thursday	Friday
PROCESS	1. Human resources exchange development 2. Futures seminars	1. Learning groups 2. Project planning	Individual Interviews	Individual interviews	Individual interviews
			Mentorships	Stewardships	Micronets

Evaluation	Formal		Informal	
		1. Student self-evaluation 2. Teacher recommendation 3. Heads of departments interviews 4. Coordinator interviews		1. Parent 2. Peers 3. Mentors 4. Other resource people

unique feature is the existence of a separate department—Alternative/ Special Education—that supports and monitors over ten special programs, including the Mentor Academy Program.

From the course description in the student handbook (Exhibit 2-2), the program is clearly multilevel and multidisciplinary. It provides one semester of social science credit (120 hours). Enrollment is limited to 25 students. The program requires no additional funds or staffing.

The students attend five 70-minute periods a week scheduled for the last period of the day, over a whole semester. One credit/one course/ one semester is the basic model. Both teacher and students are involved in the regular program as well.

Flexibility

Because MAP is a skill-based program (assessment, acquisition, application, apprenticeship, and anticipation), its structure is flexible. During the networkshop web the students meet with the program facilitator every day for skill building. During the mentorship, stewardship, and micronet webs, the students meet as a total group on Mondays and again individually one other day for a 15-minute feedback session. The rest of the time activities are carried out individually or in small groups.

Two other approaches are being considered to expand student opportunities from MAP. One approach is a 2-semester program for students in grades 10, 11, 12 with a multicredit component—science, art, etc. Students in grade 8/9 would also be allowed to elect the course as part of their orientation to complete a series of enrichment skills workshops and to learn how to learn through enrichment in all subject areas (Appendix 1).

A second approach under consideration is a satellite program based in a local library central to several high schools. This approach is very practical for declining enrollment situations. It also avoids duplication, competition, and exhaustion of resources, and makes better use of community facilities.

ORIENTATION

The orientation (skill assessment) web is distinct in that it focuses on assessment and on a match of students with potential programs and with other students. The main activities include identifying:

1. Students who will be in the program.
2. Research interests.
3. Learning styles.
4. Career interests.
5. Learning cycles.

Exhibit 2-2. Academy—Course Description for Handbook

AES060—Academy

The purpose—Academy is an opportunity for academically motivated students in grades 10, 11 or 12 to pursue in depth his or her specific interests in the social science area, i.e., history, sociology, geography, family studies, world religions, environmental issues, world politics, psychology.

Academy challenges the student to:

1. Learn different skills—creative problem solving, contract learning, independent research skills, superlearning, microcomputers, community video programming, interviewing, group.

2. Learn with different people—university professors, practicing professionals, community workers, senior citizens, community college teachers.

3. Learn in different places—McMaster University, Sheridan Community College, professional offices, community organizations conferences, learning exchange with other schools, cable T.V. studio, elementary schools.

Multi-level

Multi-disciplinary

Choice of study—

Different

Difficult

Semestered

The course—Academy students spend the first 4 weeks of the course in intensive skill development workshops and contacting resource people related to specific interests, the next 6 weeks in meeting with mentors at McMaster and Sheridan Community College and professionals in the community who agree to explore, expand, and exchange similar academic and personal interests. The other 8 weeks involve students in leadership projects, exchanging what was learned and planning new ways of using this information after the semester.

The students—Academy will have a maximum of 25 new students per semester. Students will choose it as an option; final selection will be based on written recommendations, past record of academic achievement in social sciences, and personal interview.

The results—Academy participation will produce research studies of a high quality on specific topics from students who have demonstrated the application of newly acquired skills; each student will be involved in learning groups that will produce cable TV programs on community issues and topics of interest.

6. Self-concept.
7. Creative abilities.
8. Parent support network.
9. Student support network.
10. Summer supplemental research.

The orientation web begins before the course and continues throughout since the whole program is an orientation to stewardship and each web is an orientation to life-long learning.

As the program evolved, the need to match student learning style better with program and teacher styles has become apparent. During the first year of the program, identification was based mainly on achievement—grades acquired in social sciences over 3 years and social science teacher recommendations. In the second year a list of characteristics emphasizing independence, a scenario on how students would pursue study independently, a self-profile, recommendations from other teachers, a creativity test, and individual interviews were added in order to assess the students' level of commitment and capability. By the third year, with implementation of a stewardship component, identification was further broadened with self-selection, characteristics of leadership potential and readiness, academy student recommendation, learning style inventory, and career and interest inventories. Readiness and self-selection are documented by having the student obtain letters of support from a family member, someone from school, and a member of the community (Exhibit 2-3). In addition, students were required to write a letter of support for themselves. An interview is also conducted to assess self-concept.

Student Selection

Selection of students for the fall term takes place during the preceding February. Prior to this, the program is advertised in the student handbook, in community newsletters, and by word of mouth. A memo is sent to all social science, English, and arts teachers, heads of departments, and student counselors, asking for recommendations based on specific criteria (Exhibit 2-4). About 80 names are generally recommended. A letter is sent to parents, inviting them and their son or daughter to attend an information night at school before the student selects his or her next year's program.

At this meeting, MAP expectations are outlined, emphasizing the importance of the student having a specific topic of interest to explore and a willingness to become involved in new learning situations. Previous participants share experiences. The program is stressed as an alternative to the classroom, community and experientially based, with an emphasis on leadership training. The learning webs are discussed with a focus on evaluation, products, differences from the regular program, dropouts, advantages, disadvantages, career, and parent involvement.

Exhibit 2-3. Identification Process: People Support

Letters of support for:

1. Your ability to be flexible.
2. Your involvement in working with people of all ages.
3. Your joy of learning.
4. Your idiosyncrasies.

from:

1. Yourself
2. Your home i.e., parent, brother or sister, relative, friend of the family.
3. Your school i.e., teacher, coach, club member, friend, counselor.
4. Your community i.e., recreation, church, coach, professional, neighbor

On receipt of letters, a personal interview will be set in order to assess attitude toward change and ability to gather people support.

Exhibit 2-4. Identification of Students

Steps: 1. Teacher recommendation
2. Grades
3. Scenario assignment
4. Interview

Teacher recommendation was based on the following criteria:

Characteristics

_____ intellectual curiosity
_____ independence of thought
_____ flexibility in thinking and expression
_____ ability to do extensive reading
_____ aptitude for critical analysis
_____ ability to research independently
_____ fluency in producing and expressing ideas
_____ ability to relate your subject to other areas of interest
_____ self-discipline
_____ ability to work well with others
_____ potential for leadership

September

It is the first day of school. You are about to attend your fifth-period social science class. A notice is pinned to the classroom door:

"There will no no social science class this semester."

Rumor prevails that a strange disease, "socialitis," has strangled the voices of the social science teachers and numbed their fingers and toes, leaving them totally despondent. (Geographers have renamed the condition hoof and mouth disease.) It is too late to take another subject, but the principal, realizing the immediacy of the crisis, has authorized you to decide, design, and develop a social science program that would relate to your specific interests and not require classroom space.

What would you study? How would you do it? How would you maintain your interests throughout the semester? How would you know that it was all worthwhile?

The program has a unique perspective on grading. The administration and involved departments have agreed to give an A to all students enrolled in the course, since their very selection is proof of their track record and recognition of their desire to learn more effectively in different ways. Both parents and students totally agree with the devaluation of grading as the motivator for achievement. The A equals trust, belief in the students' potential, by acknowledging what they have already accomplished many times and what they could possibly achieve.

Of approximately 80 students originally recommended, about 40 usually choose the program, by the end of February; through interviews and an interest check list (Exhibit 2-5), 20 to 25 students are selected. Weighting gives first choice to grade 11/12 because it is those students' last opportunity. The main reason that students are not selected, especially at the 9/10 grade level, is their maturity level, or readiness, as assessed through the interviews. All the students recommended become part of an academy resource pool, which facilitates developing other programs based on student interests and needs and watching growth in individual student readiness.

In April several interest inventories are given. A discussion about learning cycles helps to assess the students' awareness of their reading, writing, thinking, acting, and nonacting learning cycles. All this assessment helps to identify more clearly the needs and nature of skill development individually and as a group.

In May a second meeting is scheduled for those students who have been selected for the program and for their parents. The purpose of the meeting is to discuss the test results and to re-emphasize the focus of students as resources for themselves and for each other. A creative problem-solving exercise is used to identify areas of connections related to student and parent interests and resources. The beginning of an academy human resources exchange network is mapped out. For example, a student has an interest in law, his parents have a lawyer who would meet with him, he has some friends who are in a law class at school, other students have older brothers or sisters in law school, other parents have lawyer friends, another parent has a brother who works in the local police force, the teacher has access to the school attendance officer, someone remembers a special weekend feature in the local newspaper on crime increases, and on and on.

Even if none of the parents and students link interests and resources (which has never happened), they all are more aware and better able to look for linkages. Often students already are actively involved in community service but have not thought of their associations or themselves as resource builders. Some discussion is also generated

Exhibit 2-5. Academy Interest Check

Name _____.

A. Academic Interests

Social Science Subjects

Environmental studies
Geography
History
Politics
Psychology
Religion
Sociology
_____

First choice _____

Specific topics 1._____

2._____

Second choice_____

Specific topics 1._____

2._____

B. Career Interests

1.

2.

3.

C. Interests in Academy (Why do you want to take Academy?)

1.

2.

3.

4.

5.

D. 1. Draw your most positive personality trait.

2. Draw a picture of your life in 15 years.

around background materials (reading, video) in the different interest areas of the students since summer is a good time to digest introductory materials and to focus on very specific topics related to academic interest. Teacher contacts are suggested at this time. Before the course ever begins, the components of the orientation phase, all the support networks—students, parents, teachers, community—have been activated.

Group Identity

In June a group-building meeting of the selected students emphasizes their importance as the primary support system and also starts a number of summer linkages, i.e., summer jobs, projects, volunteer work, and new friends. The final event in June is the academy reunion, hosted by the previous year's students, to which all past students are invited. The reunion strengthens the neophyte group as part of a larger community with shared interests and experience.

In September, on the first day of school, information is updated; each student begins a human resources file, which organizes information around topics and people. Then the students write on large sheets of paper what they want to give and get in the program over the next 5 months. These sheets are taped on the walls; each student spends 3 to 5 minutes sharing expectations. Official orientation has ended; skill building begins. By the end of this web, students have assessed their creative learning style and cycle skills, have identified interests, have acquired assessment skills, have applied their skills in resource sharing and network building, and are anticipating, through supplementary research, the next web, the networkshop, which emphasizes skill acquisition.

NETWORKSHOP

The specific purpose of the networkshop is skill acquisition in all areas useful to becoming an effective mentor, steward, and networker. This web is also an orientation, assessment, and introduction to a variety of new skills learned through differentiated application in the other three webs. The human resources file (Exhibit 2-6) acts as a continuous assessment and resource development tool throughout the program and eventually becomes computerized in the micronet web in order to extend skill application beyond the program.

The networkshop, with its four interactive areas of skill building (self-help, group help, community help, global help), was expanded during the second year of the program; in the first year too much was assumed about skill competencies of the gifted learner. School does well with the basics of reading and writing—learning from nondirect experience. However, living is more complicated and interesting—direct and dynamic—as the gifted discover early in their schooling. Unfortunately, they are not taught the skills necessary to maximize experiential

Exhibit 2-6. Human Resources File

Topics

1. Academic interests
2. Career interests
3. Creative interests
4. Junior citizens interests
5. Senior citizens interests
6. Skill interests

Subtopic

1. Academic interests
   a) Documented information
   b) People contacts
   c) Organization contacts
   d) Future ideas

Access

1. Documented information

   a) What it is
   b) Where it is located
   c) How accessed
   d) When accessed

2. People contacts

   a) Who it is
   b) Where located
   c) When available
   d) How reached

3. Organization contacts

   a) What it is
   b) Where it is located
   c) Contact person
   d) When available

4. Future ideas

   a) What they are
   b) How each relates to other subtopics

learning, or they learn them haphazardly, with many gaps and insecurities.

Approximately 40 hours are spent on concentrated skill acquisition.

Self-Help Skills

These skills include:

1. Self-assessment.
2. Journal keeping.
3. Interviewing.
4. Telephone.
5. Decision making.
6. Creative thinking.
7. Research.
8. Contract learning.
9. Self-evaluation.
10. Stress management.

Much self-assessment already took place during the orientation web. In the networkshop web, assessment is a continuous evaluation by the student and facilitator of the competency level of new skill acquisition. There is a need to build confidence in the student through the use of skills and the reflection of how that use can be improved. Much of experienced learning comes from risk—risking mistakes and learning from those mistakes. Assessment can only be constructive when it is seen as a mechanism for growth and it recognizes the potential of the student to be resourceful enough to respond to growth.

The journal-keeping activity (Exhibit 2-7) is based on T. Rainer's work (1978) but has been broadened to become one of a number of feedback mechanisms used to chart a student's personal learning process (Exhibit 2-8). The journal is examined continuously. It is called an analog because it functions as a logging or recording device for the hours spent on learning. During the first year of the program, students were not required to keep a journal, but many of them were concerned that they might forget their experiences. In the second year the journal was emphasized, but some students complained that the task was something that they could always do on their own or in a regular class. Journal keeping as a means of feedback is right for some but not all students. Consequently, the journal is used only as one of many feedback possibilities. What is important about feedback is that there are as many options as there are individuals to choose and create those options.

Exhibit 2-7. Academy—Analog

Learning is an event. It has a beginning and an end, is meaningful, and is related to other events. How meaningful the events of the academy program are, is directly related to your record of what you did, how well you did it, and its importance to you and others.

The analog is your continuous, experiential, and personal record of academy events. The analog is also a dialogue with self, supporting the search for self-awareness and self-understanding and perceiving the totality of events, their happenings in relationship to you.

The following suggestions are ways to help your search for meaning:*

1. Beginnings . . .

   " ... flow. spontaneity, intuition .... "
   " ... write fast, write everything, include everything, write from your feelings, write from your body, accept whatever comes .... "

2. Ways of expression

   a) Catharsis (emotional release)
   b) Description (narrative of personal experience)
   c) Free-intuitive writing (spontaneous writing)
   d) Reflection (self-observation, personal history)

3. Ways of extending

   a) Lists (do lists, hit lists, stepping stones)
   b) Portraits (personal projections)
   c) Maps of consciousness (doodle, photo, symbols of state of mind)
   d) Guided imagery (written meditation, fantasy trip, poetry)
   e) Altered point of view (in other's shoes, yourself as "he," time machine)
   f) Unsent letters
   g) Dialogue (conversations with self and other persons, events)
   h) Dreams
   i) ESP, remote viewing, prediction

*T. Rainer. The New Diary.

Exhibit 2-8. Feedforward—Feedback

Much of the learning in academy, both contents and skills, is unrelated to familiar learning or schooling, i.e., reading books, writing essays, teacher ownership. Consequently much of what is being learned is not recognized by students as real learning. School, rather than bridging living and learning, more often separates it. Moreover, there are often few real choices except whether to do it or not and how much. The choice is more quantitative than qualitative.

The following are examples of different ways students have explored anticipating their learning and participating in sharing what was learned.

1. Written
   - Journal
   - Letters
   - Scenarios
   - Poetry

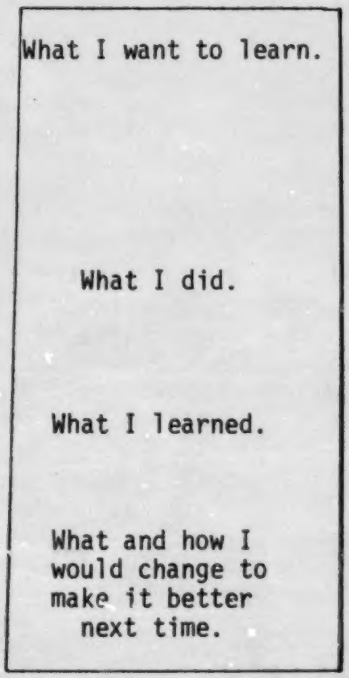
2. Oral
   - Tape
   - Music
   - Debate
   - Discussion
   - Interview

3. Visual
   - Art
   - Photographs
   - Videotape
   - Scrapbook
   - Webs
   - Matrices

4. Physical
   - Dance
   - Drama
   - Psychodrama
   - Role playing
   - Pantomime
   - Yoga

5. Psychic
   - Ouija board
   - Meditation
   - Telepathy

6. Synergy



Interviewing is done in three sessions. In the first, students demonstrate the difference between a conversation, confrontation, and an interview. They are divided into groups of three (triads), where they alternate interviewing, being interviewed, observing an interview, and giving feedback on mannerisms, feelings, etc. In the next session the students interview people from school, teachers, and staff. On the following day, in a third session, they interview people from the community—seniors and professionals whom they do not know. What is learned from the interviews is discussed in each session between students and resource people. The students also watch television talk shows to learn about interviewing style and techniques. Interviewing receives much time because it is crucial to information access and networking.

Telephoning is equally important, although often not considered a skill. A representative from the telephone company visits to talk about effective telephone techniques. Students practice first in triads with imaginary phone conversations. One evening the students call the teacher to practice their skills and get feedback; another evening they call other students' parents to explain the program and request parent involvement. The telephone is often the first point of contact with resource people and is extremely important for subsequent networking.

Decision making which begins in the orientation phase, becomes a crucial part of contract learning. The student must ask, "What can I realistically accomplish in a set period of time and how can I use my learning style and cycles to guarantee such accomplishment?"

Creative thinking involves the students in creative problem-solving techniques, i.e., brainstorming, and familiarization with the work of deBono (1978), Noller, Treffinger, and Houseman (1979), Noller (1977), and Parnes, Noller, and Biondi (1976, 1977).

Research involves the head of the social science department and faculty members of the local university in demonstrating research techniques and problem solving.

Contract learning is the beginning of a long series of minicontracts (Exhibit 2-9), establishing, first on a weekly basis, what is to be learned, how it will be learned, what criteria will be set for evaluating learning, and what changes will be made in the next contract to make learning more effective and realistic. An important part of the contract is the matrix management map, on which the students record, on a weekly basis, what was learned, how, who was involved, where and when it took place, and how it was communicated to others in the group. One map focuses on skills (Exhibit 2-10), another on contacts (Exhibit 2-11); a third, which is done by the program facilitator, maps out the total picture of resources used (Exhibit 2-12). Unless some daily and weekly consciousness of what is taking place is registered, all the people skills and networking are forgotten or not given recognized learning importance. Like enrichment experience must be relevant learning. Concrete <u>evidence</u> of the process must be experienced.

Exhibit 2-9. Academy Learning Contract

Dates (-)

ACADEMIC STUDY	Topic_____	NAME/LOGO
CAREER INTEREST	Focus_____	
MENTOR FOCUS	Type _____	
ME STUDY	Focus_____	

PLANNING

WHAT	Individual	Time Log	Group	Time Log

HOW	Individual	Time Log	Group	Time Log

HOW WELL	Individual	Time Log	Group	Time Log

Exhibit 2-9. Academy Learning Contract (Page 2)

ANALYSIS

WHAT HAPPENED	Individual	Group

WHY CHANGES	Individual	Group

SO WHAT	Individual	Group

Exhibit 2-10. Skills Matrix Management Map

Week / Core	Inter-viewing	Analog	Decision Making	Problem Solving	Group	Research	Evaluation	Other
Academic								
Career								
Senior								
Junior								
Creative								
Leadership/ service								

Student

Exhibit 2-11. Network Matrix Management Map

Week	Student									
				Contexts			Communications			
Core	Contents	Contacts	Contracts	When	Where	How	Analog	Report	Group	Other
Academic										
Career										
Senior										
Junior										
Creative										
Leadership/ service										

Exhibit 2-12. Master Network Matrix Management Map

Student	I	Focus	Academic	Career	Senior	Junior	Creative	Leadership

Self-evaluation is also a crucial part of the learning contract, supporting the necessity to reflect on what one experiences in order to improve upon it. It must recognize that the student is a key evaluator in the process.

Stress management is a study discussion of burnout, as well as learning time-management skills and recognizing the importance of learning cycles to maximize learning with less stress.

Group-Help Skills

It is important for gifted students to learn how to function effectively and comfortably in small group situations. All too often in regular classrooms, gifted students carry more than their share of the load. This can create negative attitudes toward working with others. Often too, gifted students prefer individual research and independent study, since they can move at their own pace, not being held back by others. Consequently, "doing your own thing" means "doing it alone."

The group-help skills—problem solving, decision making, leadership, communication, and peer counseling—are taught through a group process and are applied in a number of group projects developed around a shared interest or task (Exhibit 2-13). As with interviewing, a participation and observation technique is used. The "fish bowl" activity allows one group to perform while another observes. Approximately a week is spent on group-help skills.

Community-Help Skills

These skills focus on helping students identify community resources, access those resources, develop them, and share them by making others aware of their availability. One way to organize the teaching of community networking skills is to cluster them around modeling, mapping, matching, and managing (Exhibit 2-14). Through these clusters, students are introduced to needs assessment, delphi techniques, local cable company and community programming, conceptual mapping, small business management skills, learning-exchange concepts, microcomputer technology and use, and general systems theory.

Global-Help Skills

Because of a recurring interest of the students, in the third year of the program global-help skills were introduced. Exploration of the split brain theory, mind consciousness literature, ESP studies, super-learning, and East/West philosophies were included. The term used to link hemispheres of the brain and the hemispheres of the world is hemispheric learning. The focus on human potential and the responsibilities to actualize that potential leads to many creative activities and exploration in the skill area. Most other skills have a practical bent, whereas these allow for some free flow and "weird" happenings.

Exhibit 2-13. Purposes of Learning Groups*

The groups are structured for three learning tasks:

1. Information exchange in shared social science area of interest.
2. Developing a community action project.
3. Learning about group dynamics.

These activities will:

1. Support the individual in improving his or her competency as a practitioner outside the group:

   By individuals seeking assistance of the group with their needs and plans and bringing feedback on results in future meetings.
   By testing what we have done with each other.
   By pooling knowledge of resources outside group.
   By sharing learning plans for help with problems.
   By checking out objectives, plans, strategies that individuals want to carry out outside the group.
   Group can learn about effectiveness of methods of problem solving, "coaching," etc.
   Group can critique, raise problems and issues arising from above.

2. Provide a forum to improve interpersonal skills by providing support to individual efforts for change:

   By individuals bringing learning goals to the group.
   By giving appropriate feedback on individuals' skills and work toward changes.

3. Give opportunities for understanding and performing roles in the group process in order to increase individuals' ability to work in and facilitate groups:

   By learning how a learning group works and our role in it.
   By learning from our own experience (by process, observations, interventions, setting tasks).
   By describing group development and roles.
   By relating to theories and the existing body of knowledge.

4. Provide opportunities for developing and practicing skills in diagnosis, design, management and evaluation.

5. Promote creativity and new ideas for participants and program:

   By providing a location for synergy. Group is a place where new ideas or activities will originate through group learning linkages between individual and community needs and resources.

* Adapted from Adult Education Department, O.I.S.E., Toronto

Exhibit 2-14. Community-help Skills

Networking (linking) individuals and their resources—personal, professional, projective.

Learning how to become well-connected.

1. Modeling—linking purposes through

    a) Needs assessment
    b) Trends analysis
    c) Scenarios
    d) Synergy

    to ... Assess

2. Mapping—linking places through

    a) Spacing
    b) Scanning
    c) Spanning
    d) Scoping

    to ... Access

3. Matching—linking people through

    a) Matrices
    b) Webbing
    c) Peoplenets
    d) Syntegration

    to ... Action

4. Managing—linking processes through

    a) Change agents
    b) Linking agents
    c) Systems
    d) Networking

    to ... Anticipate

1, 2, 3

At the end of the networkshop web, a meeting held with the parents provides feedback on their perceptions of the program, and provides an opportunity to explain again the different webs so that they may anticipate the next stage. The meeting also allows for an update of the parents' "growing" resources.

Although the networkshop's main purpose is skill acquisition, it also involves application of the skills as they are being learned and anticipation of the next three webs of intensive application, first as a learner, then as a mentor/leader, and finally as a networker.

MENTORSHIP

In this phase, lasting about 1 month, the students apply their newly acquired networking skills to working with mentors in the community. Each student sets up a mentor network. This includes a senior citizen, a junior citizen, a practicing professional in an area of career interest, an academic professional from a postsecondary school in an area of interest, and a "creative" person. The student also begins learning how to enter his or her human resources file on the microcomputer. Mentors can be woven around a particular interest or career or can reflect six separate pursuits. In other words, there is no one right way to create an individual mentor web.

A process structure is provided only as a starting point (Exhibit 2-15). The basic mentorship contract requires that something new be learned from each mentor; that who, what, where, when, and how often are negotiated between the students and mentors, that the students and mentors reflect on their experiences and share those with others. The students spend as much time studying mentorship as they do studying with mentors. Learning how to share knowledge is as important as its occurrence. As mentioned, by the second year of the program, students became the networkers responsible for identifying and managing their own mentorship, with weekly feedback sessions with the program facilitator or the shared-learning group.

Mentor Roles

Each mentor in the network has a specific role. The senior citizen who can bridge the generation gap is often a mentor of "understanding," although he or she may also be a mentor in a specific interest area. The junior citizen may also be a mentor of "understanding," bridging the generation gap ir reverse. Younger mentors may be able to provide relevant experiences that the students missed, such as learning to play fantasy games. Linking senior and junior mentors often awakens an interest in stages, or "passages," of growth and development. The professional mentor is usually associated with a career interest. The academic mentor is found at the local university or community college or is a teacher in the school sharing an interest beyond teaching. The creative

Exhibit 2-15. Mentorship—Contract

Process (quality/quantity/quantum)

1. State clearly five key results that you want to accomplish, i.e., new knowledge, new skill, new people, new career, new attitude.

2. Outline how you will know that you have accomplished these results to your level of expectation.

3. Collect information about people who are willing to help you accomplish these results.

4. Develop some type of criteria to determine which of these people will be the best helpers.

5. List in order of priority all possible people on the basis of the above criteria.

6. Contact best possible people, assessing their initial matching qualities.

7. Negotiate mutually agreeable arrangements with people in regard to meeting, time, place, frequency, duration, materials used, end of session, etc.

8. Carry out agreed arrangements

9. Assess, on a continuing basis, your and the helper's ability to meet original expectations.

10. Keep statistics on number of people contacted, number of people who help, number of different learning environments, number of topics, etc.

mentor supports the student's interests such as dance, music, instrument making, cable video, relaxation, inventions, poetry, or photography. The microcomputer as a mentor has a very practical task of creating a human resources directory for the student's learning. Some keys to successful mentoring as mentioned in Runions (1980) follow. Mentors expect students to:

1. Have a total learning experience, with equal energy to doing and thinking.

2. Be ready to try, experiment, and explore.

3. Give feedback on learning so that the mentor can give perspective, integrate the experience, and clarify and restructure the experience.

4. Be able to demonstrate new skills—knowing, seeing, and self-discipline.

5. Be prepared to change a way of life.

The mentors' responsibilities to students include:

1. Being conscious of being a personal and cultural role model.

2. Being aware of teachable moments.

3. Being able to implement planned, guided experiences based on optimum conditions and student need.

4. Teaching by indirection, continuously giving realistic appraisals of student progress and receiving conflicts.

5. Being creative in structuring the creative pause in which the student is led through stages of creative problem solving.

Conditions for effective mentoring include:

1. A program more rooted in experiential learning—intensive and extensive.

2. More careful selection and matching of participants.

3. More open-ended learning.

4. Competency-based learning, measured by successful completion of task, mastery of technique, ability to structure problems and solve them.

Some practical considerations for successful mentoring at the high-school level based on MAP experience follow.

1. Student and mentor chose each other after meeting alone, face to face.

2. Specifics of the contract (time, content, expectations), although concrete, must be mutually acceptable and continuously negotiable on mutual availability and interest growth.

3. Each mentor is perceived as a contact for other students and for other mentors.

4. A mentor is a mentor, not another teacher or official evaluator.

5. Every mentor is a learner, as every learner is a mentor.

The Monday meeting of the whole student group is an excellent time to post weekly contacts on a mentor board or to use a master matrix management map and to check the human resources file in order to avoid overuse of certain mentors and to identify new interests or gaps in interests. Mondays also become a series of futures seminars that involve mentors in presenting new directions in their fields. The academy group usually divides itself by subjects, such as psychology or sociology, or careers, such as medicine or law. Each subgroup plans a futures seminar for those interested. The seminars help develop "structured" discussion sessions and synergistic thinking.

'Deschooling'

Students begin to "deschool" the program and talk of unlearning and learning from mistakes; they share inadequacies. The program becomes a self-expectation, not a course, and self-directed, not teacher-controlled. Working with mentors, the students begin to become objective, more empathetic to other points of view, and more accepting of other people's feedback.

Throughout the mentorship web, students write reflection reports, fill in matrices charting their skills and their contacts, and begin to seek help as they analyze learning difficulties from different points of view. Feelings of frustration are expressed; a sense of failure of not meeting their own expectations, or even knowing what those expectations are, often surfaces. When a small-group experience in the networkshop moves from academic exercise or silence to spontaneous conflict, cooperation, and sharing experience in the mentorship, it is a sign that the students are moving toward increased integration of themselves and their skills. When the learning contracts more realistically identify the learning objectives and their consequential action and are consistently carried out to the students' level of expectation, they are beginning to manage their learning.

All these factors contribute to freeing the students for taking more responsibility for themselves and for others, the process of moving from learner to leader. The students have applied their networking skills with mentors; in the stewardship web, they can apply them as stewards, leaders. Although the mentorship emphasizes skill application, through the constant feedback with the program facilitator, assessment, acquisition, and anticipation also take place.

STEWARDSHIP

Stewardship is leadership in training, becoming a community mentor. Students begin to ask such questions as, How can I be a more equal partner in learning with others? How can I better serve the needs of those who have served me? The orientation, networkshop, and mentorship experiences have given the students the necessary confidence and competence to pose and answer these questions. Stewardship further challenges mentorship. Like mentorship, it gives opportunities for applying the skills acquired in the networkshop, but those opportunities are in the form of a leadership apprenticeship involving responsibility for others as well as for oneself.

Moving to Stewardship

At the mentorship level, a student and a mentor are in a learning or skill acquisition relationship; at the stewardship level, the student engages in activities of service. These activities are based on what the student has learned in the mentoring relationship. One example may be the establishment of a student job bank for helping senior citizens with light housework and errands.

The number of senior citizens is increasing every year. Establishing contact is often not easy. A student job bank would register students who wish to assist senior and disabled adults after school and on weekends with light housekeeping, gardening, painting, or running errands. Through community advertising, a practical contact is established with those needing help. A network of students and senior citizens is developed for the purpose of sharing new-found resources and job services.

A mentoring relationship with an academic professional can be transformed to a stewardship relationship with a younger or less able student. A favorite focus for mentoring is the microcomputer, but other pursuits, such as science fiction, journal writing, and magic are also popular. Other favorite group activities include young inventor clubs, fantasy games, problem-solving competitions, theater productions, community resource development, dance, and gymnastics. Students often match themselves with favorite elementary school teachers. They then identify individual and program needs and develop activities that serve both teachers and classes.

By giving public visibility to activities shared with creative mentors, students move toward a stewardship model. Creative learning can be shared through a festival that displays the talents of both mentors and aspiring students. Typical activities are the designing of musical instruments, creative problem-solving competitions, building of time tunnels, self-designed creativity tests, development of new team sports, plays about great moments in future creative discoveries, the producing of music/poetry/sculpture/mime/art/dance, and microcomputer games. Such a festival provides students with the opportunity to create and manage activities that truly celebrate the joy of learning.

In MAP, learning from career mentors has generated two main activities: (1) production of videodocs (video interviews), with career mentors answering questions of interest to other students, and (2) creation of careers. Much of the cooperative education movement has focused on "work experience" career testing. Many of the skills acquired by gifted learners—self-directed learning, decision making and problem solving—are equally useful for creating careers or entrepreneurships. Students link with Junior Achievement programs, work with entrepreneurs, identify career gaps and multicareer choices, and in times of few jobs, create their own part-time jobs.

Leadership Projects

The school is fortunate to have a 17-acre site bordering a conservation area, used for learning in a natural environment. This site allows numerous leadership opportunities. One in particular allows students to develop resources in environmental science and relevant outdoor education. Some students have negotiated with elementary school teachers to offer a 1-day program at the site.

Other community resources are used. Learning community videotape programming from the local cable television company has fostered many leadership projects around community and environmental issues, including drugs, housing, vandalism and regional planning. Students have organized cable debates, interview shows and panels. They have written scripts for the programs and produced them.

Another program now being explored to serve both the school and the community is LeSS (Learning Enrichment Service by Students) (Appendix 2). A number of students have gained leadership experience by working closely with the local Social Planning Council. Some committees within the council, such as programming and volunteer service, have student members involved both in committee planning and community action.

Only imagination limits the possibilities of leadership opportunities. Community resources have always been readily available, accessible, and open to further shared development. MAP's importance is being a skill-based community-learning program, which uses those possibilities.

Like most programs, the mentor academy develops many products (weekly learning contracts, academic interest research, community video tapes, leadership projects, human resources file, interview tapes, skill competencies, self-confidence) and also a continuous learning process, the micronet.

MICRONET

The fifth web actually begins with the human resources file in the Orientation phase. It is developed throughout the webs with each new contact and identified resource. The micronet web trains the students to network their resources via microcomputer programming. As the last web, it anticipates the end of the formal training. The micronet begins a life of networking, which students develop in relation to their continuously evolving interests and contacts. Like the other webs, the micronet gives the students opportunities to apply networking skills on an individual and community level. It also anticipates the impact of the microcomputer revolution in managing one's learning by more effectively tapping the microelectronic resource of an information society.

At MAP's end, the students have established a personal micronet—an individual human resources directory—and have helped with a community micronet. The micronet in many ways becomes the Individualized Education Program for the student, giving ability and skill to plan needed learning.

Key Topics

Through the human resources file, the students identify key topics around types of mentors (academic, career, creative, senior, junior, micro) from whom they will be learning. Each key topic is further specified by subtopics. Each subtopic is further refined, based on access to different types of available resources: (1) documented information (book, video, tapes, etc.), (2) people contacts, (3) organizational contacts, and (4) associated ideas.

The access to these resources is organized by careful identification of types of resources, their locations, their main contact, and their best time for contact. Once compiled and detailed, this human resources file is then entered into the microcomputer and updated weekly by the student. The student is taught how to set up the program by other students.

In the stewardship web different leadership projects reflect the graduation of the student to mentor. In the micronet web, the graduation of the steward to a networker is evidenced by different projects, projects that demand wider community management and service.

Community Micronets

Community micronets take many forms. For instance, learning from senior citizens and establishing a school-based job brokerage become a senior citizen resources exchange. Students have met with a group of senior citizens across the region who had completed a 2-year project, a regional resource directory. Like most printed directories, it was outdated before publication. After several meetings, the senior citizens and students identified key topic areas for a micronet and possible ways of identifying and contacting people who would be interested in exchanging skills or sharing interests. The students then demonstrated a senior citizens human resources exchange on the microcomputer based on the senior citizens directory. The senior citizens saw the advantage of quick update and feedback and realized how easy the computers were to use. The students then offered to train a group of senior citizens to manage the system and to develop the program. Thus, the students have become information consultants.

In another case, learning from career mentors and creating new careers generated the need for a careernet to identify and facilitate easy access to career models in the community. The students are interested in developing this micronet for student services and cooperative education in the school and for the local Social Planning Council-Volunteer Bureau.

In addition, learning from some individual teachers as mentors becomes a schoolwide human resources management system for teachers, students, feeder schools, parents, and the local community. As mentioned, Lord Elgin has been an innovative school, using and developing many resources. There has been little time to share. The students have met with teachers, have designed an information access file (Exhibit 2-16) and from this are developing a human resources directory. The next step is to create a micronet for the school and community.

The last official activity with the academy program is the academy awards night, a satirical look at the past. This night focuses on humor, an often ignored characteristic of the gifted. Each June, the academy reunion continues the linking cycle of personal growth and social development.

Exhibit 2-16. Information Access File

Name	Dept.	Subjects Taught

Interests associated with teaching (four most important interests):

1.

2.

3.

4.

Specific skills in teaching in which you feel confident (four most confident):

1.

2.

3.

4.

Interests and skills other than teaching (four most interesting):

1.

2.

3.

4.

Interests that you have that have not been explored.
Skills you want that you do not have (four most wanted):

1.

2.

3.

4.

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CHAPTER 3
OUTCOMES

The Mentor Academy Program is evaluated in various ways, formal and informal. Initially the students are evaluated by the recommendation criteria used by teachers to assess those whom they feel will benefit from the program. Throughout the semester, on a weekly basis, both the program facilitator and the students evaluate their own planning process and progress through a personal interview. This direct feedback allows continuous assessment and anticipation of how to learn better. A taped, hour-long interview is scheduled at the end of the program. Facilitators and students use the feedback from this interview to evaluate the four skill areas: self-help, group help, community help and global help. Because MAP bridges two departments—Alternative and Special Education and Social Sciences—both department heads evaluate the program through interviewing a number of students, assessing the program as a whole by its anticipated key results (Exhibit 3-1).

Informally the program is continuously evaluated. The many meetings with parents allow feedback on what is working or not working and possible areas of improvement. The students, with their peers outside MAP, are continuously asking why it is worthwhile, what is different. Mentors—teachers and professionals in the community—are continuously giving feedback to students and teachers. Many products of the program are people products—community-video, human resources exchanges, educational internship, etc.—and thus create a high profile, offering the community the opportunity to give quality feedback.

Since MAP is a program that students choose to take when they are ready to risk change, the real evaluation is evidence of that change and a feeling that it was all worthwhile. The self evaluations (Exhibit 3-2) capture the essence of what MAP can do for gifted students.

Exhibit 3-1. Academy—Program Expectations/Evaluation

Program Key Result Areas

People Involvement

Result: Students better able to learn from and with a greater number and variety of people.

Indicator: Students met with academic, professional, community, peer, and technical mentors to explore, expand, and exchange mutually shared learning interests.

Decision Making

Result: Students better able to make effective decisions based on individual and social needs and learning interests.

Indicator: Students decided area of focus, designed learning program to facilitate developing individual and social needs and interests within that focus.

Action Learning

Result: Students better able to act upon decisions made and apply newly acquired skills in differentiated learning situations.

Indicator: Students became involved in learning group projects, community service activities, tutoring and mentoring situations.

Problem Solving

Result: Students better able to resolve problems arising from differentiated learning situations.

Indicator: Students identified problem areas, developed and implemented alternative, creative problem-solving strategies to resolve difficulties previously beyond own resources.

Self-Evaluation

Result: Students better able to meet own learning expectations for area of interest

Indicator: Students identified learning needs and interests and designed a realistic approach to meeting these within a specified time and with greater satisfaction.

Evaluation

Components

Continuous

evolving, feedback

Contextual

people, places

Credible

realistic & relevant for learner

Contemplative

critical, reflective

Exhibit 3-2. Academy Student Self-Evaluation

- I had always considered myself an open, although nonexpressive, person. Talking to and meeting all these people over the course of the semester helped me open up and relax with other people. I have noticed a considerable change in myself in the way I treat and react to other people.

- Somedays I did not feel like working at all. When this happened, I went on to another topic. I waited for the urge to work to return. I noticed that other people in the class also had problems with motivation and learning blocks of some type.

- When people asked me what we do in academy, I would tell them that we sat in the library a lot of the time and talked. They thought that we were not learning anything. Little do they know that this was part of our learning cycle.

- The first thing that I learned was that I do want to learn! I have to go about it differently than in school. If I'm interested in what I'm learning, then it comes easy. I taught myself to learn and get involved in things that I like.

- My views on education have definitely changed and broadened. I've learned that the only person who is truly responsible for what I receive in my schooling is me. In many ways and areas, I must be my own educator.

- The beginning of the course was a little rough for me. I found it too open and not structured enough. However, I got over this very soon.

- The main thing that I got out of the course was to become more outgoing. I learned to relate better to people, and this was probably my main motivating factor for taking the course.

- Another thing that I found was that I learned things indirectly. For example, while I would be looking for information on Vietnam, I would find interesting things on philosophy. This indirect learning can compile, possibly serving some useful purpose in the future.

- I have learned to relate to other individuals who do not know me. I have gained great confidence in myself and have therefore become a much more productive and efficient student.

- I know what I want to do now; I want to go into psychology into the specifics; human behavior. Working in the same class as other highly motivated people helped me.

- I learned more about myself, which is more important to me. Helping the kids at Frontenac Public School was something that I enjoyed and told me that I care more about people than about the job at hand most of the time.

- Many times you don't want to do something and then you find you enjoyed it when you do it. This happened when I heard about the seniors project. I didn't really want to go, but when I did, I enjoyed it.

APPENDICES

APPENDIX 1

GRADE 9 ENRICHMENT PROGRAM PROPOSAL

THE NEED

1. To teach enrichment students how to get more from their high-school learning, most of which will be spent in nonenriched classes.

2. To bridge "the enrichment gap" between Grade 8 and the academy.

3. To involve earlier a greater number of staff across disciplines in working with enrichment students on shared interests.

THE COURSE: LEARNING ENRICHMENT IN THE CLASSROOM

The focus of such a course would be how to learn in creative and resourceful ways in the classroom. This approach would give students a greater variety of skills in all academic disciplines useful throughout their schooling. Such a course would introduce new high-school students to different skills for increasing their potential, to new areas of interest and to creative mentors to guide their pursuits.

THE CONTENT

The course would be taught in modules as follows:

Module 1.	(2 weeks)	Introduction to Autonomous and Small-Group Learning (See attached unit outline.)	
Module 2.	(2 weeks)	Enrichment Approaches in the Social Sciences (See attached unit outline.)	
Module 3.		Enrichment Approaches in English, in Family Studies	Subject to discussion with departments concerned
Module 4.	(10 weeks)	the Sciences	
		Moderns	
Module 5.		Math, Business Technology	
Module 6. & 7.		The Arts	
Module 8.	(2 weeks)	Career Exploration	
Module 9.	(2 weeks)	Living and Leisure	

THE LOGISTICS

1. The course is offered during second semester at Grade 9/10 level.

2. The course is offered during the fourth or fifth period, allowing heads and teachers maximum flex-time.

3. To facilitate continuity, the course would be the responsibility of Alternative and Special Education Departments. A coordinator would

teach Module 1. and 2. and would work with participating teachers to provide coverage if needed and resources for working with enrichment students.

4. Within individual departments people are identified as interested in developing enrichment units.

UNIT 1: INTRODUCTION TO AUTONOMOUS AND SMALL GROUP LEARNING OBJECTIVES

1. To identify different approaches to autonomous and small-group learning.

2. To demonstrate different applications of these approaches.

3. To have students demonstrate skill competency in autonomous and small-group learning.

4. To evaluate effective autonomous and small-group approaches to learning with enrichment students.

CONTENT

Day 1 Assess students' approach to autonomous learning and ability to work in a small group through orientation exercises.

Day 2 Autonomous learning—contract-learning skills
Brainstorming
Objective setting

Day 3 Decision-making matrix
Conceptual mapping
Creative problem-solving

Day 4 Small-group learning
Communication, observation, leadership style

Day 5 Identify small working groups for next week's think bowl and individual autonomous learning contract for 4 days

Day 6 Think Bowl—group problem-solving

Day 7 Think Bowl—individual group solution presentation

Day 8 Autonomous Learning—Presentation

Day 9 Autonomous Learning—Presentation

Day 10 Autonomous Learning—Presentation

RESOURCES

See attached examples for all days.

EVALUATION

Teacher marks think bowl and autonomous learning presentation.

UNIT 2: ENRICHMENT APPROACHES IN THE SOCIAL SCIENCES

OBJECTIVES

1. To identify social science skills.
2. To demonstrate application of social science skills in different ways.
3. To have students complete an assignment in a format they have not used before.
4. To evaluate different social science approaches in learning.

CONTENT

Day 1 Assessment of social science research skills
Analysis of skills needed

Day 2 Examples of enrichment in the social sciences presented by individual teachers

Day 3
Day 4

a) Source materials
b) Journals
c) Video
d) Interview
e) Survey
f) Slide tape
g) Career investigation
h) Simulation
i) Graphics

Day 5 Choosing topic and approach, directions on project development

Weekend

Day 6 Project development

Day 7

Day 8

Day 9 Presentations/evaluation

Day 10

RESOURCES — See attached examples for Day 2-4

EVALUATION — Teacher assessment

APPENDIX 2

LEARNING ENRICHMENT SERVICE BY STUDENTS (LESS)

BACKGROUND

Over the past 10 years Lord Elgin High School has been actively involved in community learning. Every department in the school in some way utilizes the resources of the Burlington community. A number of programs directly support and are supported by community learning; for example, work experience, community council, resource center, early childhood education, student-as-assistant, academy, cooperative education, satellite site programs, and family studies.

The continued existence of these programs is being challenged by a number of factors:

- Increased utilization of community resources by other high schools and institutions in Burlington, causing exhaustion and duplication of community use.

- Declining enrollment, limiting the diversification of these programs, if not threatening their very existence.

- Increasing economic restraint, restricting availability of community resources.

- Need to identify new and varied resources continually.

- Need for constant and constructive feedback to improve upon existing community use and develop future alternatives.

- Need to involve the learners with a more vested interest in making a program work.

In other words all the participants in community learning are being challenged to share their resources more cooperatively in more mutually rewarding ways.

I experienced the exciting possibilities of this challenge over the past 6 years with the Mountsberg program and last year working with the Academy students. Seeing the unlimited energies and capabilities of highly motivated Grade 10-12 students initiating and generating most of their learning from community mentors convinced me even more that there are few leadership opportunities for students that challenge their "real" abilities or develop appropriate skills to meet those challenges. What evolved from both the Mountsberg and the academy experience was the need to identify skills that would facilitate students' networking community resources and the need to create appropriate experiences to realize those skills. Students experiencing the openness of and the commitment by the community to redefine its physical

and human resources to accommodate their learning further affirmed the community's readiness for continued and future sharing in many different ways and the student's commitment to service community needs.

Over the past 10 years a number of community learning models have evolved. The most appropriate for supporting student-directed learning through the cooperative utilization of community resources is the learning exchange model. Of these the most successful is The Learning Exchange (TLE) located in the Chicago area, for the past 9 years the largest and most diversified community-based educational program in the United States. Most significant is the TLE mandate to help others get started and the development of a learning exchange manual, which details the step-by-step realized potential of this inexpensive, individualized, noninstitutional, people-to-people educational process.

AIMS

1. Develop an economical and efficient vehicle to collect, organize, and make accessible information about educational and recreational resources and needs in the Burlington area.

2. Encourage individuals to assume the responsibility to teach, learn, or share their interests with others.

3. Assist public and private institutions in the development of their educational and recreational programs.

4. Become a self-supporting organization through client memberships and contributions.

5. Offer to other cities, boards of education, a working example of how the educational and recreational resources of a community can be better utilized and managed by high-school students.